

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
) WC Docket No. 17-97
Call Authentication Trust Anchor)

SECOND FURTHER NOTICE OF PROPOSED RULEMAKING

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By the Commission:

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I. INTRODUCTION

1. As part of the Commission’s multi-pronged approach to combat illegal robocalls,¹ the Commission has promoted the implementation of STIR/SHAKEN, a caller ID authentication framework.² STIR/SHAKEN is a set of industry-created technological standards that help to prevent illegally “spoofed” calls.³ Spoofing is a practice that involves the falsifying of caller ID information and it is

¹ The Commission has attacked the problem of illegal robocalls through enforcement actions, rulemakings, and collaboration with industry. See e.g., *John C. Spiller*; *Jakob A. Mears*; *Rising Eagle Capital Group LLC*; *JSquared Telecom LLC*; *Only Web Leads LLC*; *Rising Phoenix Group*; *Rising Phoenix Holdings*; *RPG Leads*; and *Rising Eagle Capital Group – Cayman*, Notice of Apparent Liability for Forfeiture, 35 FCC Rcd 5948 (2020) (proposing a forfeiture of \$225 million, the largest in the Commission’s history, for a company that made approximately one billion spoofed robocalls); *Advanced Methods to Target and Eliminate Unlawful Robocalls*, CG Docket No. 17-59, Third Report and Order, Order on Reconsideration, and Fourth Further Notice of Proposed Rulemaking, 35 FCC Rcd 7614 (2020) (establishing safe harbors from liability for the unintended or inadvertent blocking of wanted calls); *Implementing Section 13(d) of the Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act (TRACED Act)*, EB Docket No. 20-22, Report and Order, 35 FCC Rcd 7886 (EB July 27, 2020) (selecting USTelecom’s Industry Traceback Group as the single consortium to conduct private-led traceback efforts).

² The Commission’s efforts related to caller ID authentication date back to 2017, when the Commission launched a broad inquiry into how to expedite the development and implementation of this important technology. *Call Authentication Trust Anchor*, WC Docket No. 17-97, Notice of Inquiry, 32 FCC Rcd 5988 (2017) (*Call Authentication NOI*).

³ See *Call Authentication Trust Anchor*, WC Docket No. 17-97, Second Report and Order, FCC 20-136, at 3, para. 3 (2020) (*Second Caller ID Authentication Report and Order*).

particularly nefarious when bad actors spoof calls to trick unsuspecting Americans into thinking that calls they make are trustworthy because the caller ID information appears as if the call came from a neighbor or a familiar or reputable source.⁴

2. In March, acting pursuant to the Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act (TRACED Act), the Commission required voice service providers to implement the STIR/SHAKEN call authentication technology in the Internet protocol (IP) portions of their phone networks by June 30, 2021.⁵ The Commission completed implementation of the TRACED Act with respect to STIR/SHAKEN in September and required intermediate providers to facilitate caller ID authentication.⁶

3. Today, we propose a limited role for the Commission to oversee certificate revocation decisions by the private STIR/SHAKEN Governance Authority that would have the effect of placing providers in noncompliance with our rules. We anticipate that exercising an oversight role would provide necessary due process to parties that may be rendered noncompliant with our rules by the actions of a private entity without unduly interfering with the well-functioning multi-stakeholder private STIR/SHAKEN governance processes.⁷

II. BACKGROUND

4. To address the issue of illegal caller ID spoofing, technologists from the Internet Engineering Task Force (IETF) and the Alliance for Telecommunications Industry Solutions (ATIS) developed standards to allow for the authentication and verification of caller ID information for calls carried over IP networks.⁸ The result of their efforts is the STIR/SHAKEN call authentication framework,⁹ which allows for the caller ID information to securely travel with the call itself throughout the entire length of the call path.¹⁰ A key component to the STIR/SHAKEN framework is the transmission of a digital “certificate” along with the call. This certificate essentially states that the voice service provider authenticating the caller ID information is the voice service provider it claims to be, it is authorized to authenticate this information and, thus, the voice service provider’s claims about the caller

⁴ See FCC, Consumer Guides, *Caller ID Spoofing*, <https://www.fcc.gov/consumers/guides/spoofing-and-caller-id> (last updated Sept. 23, 2020). Spoofing has both legal and illegal uses. *Implementing Section 503 of the RAY BAUM’S Act; Rules and Regulation Implementing the Truth in Caller ID Act of 2009*, WC Docket Nos. 18-335 and 11-39, Second Report and Order, 34 FCC Rcd 7303, 7304-05, para. 4 (2019) (*Second Truth in Caller ID Order*). It is illegal when a caller transmits misleading or inaccurate caller ID information with the intent to defraud, cause harm, or wrongly obtain anything of value. 47 U.S.C. § 227(e)(1); 47 CFR § 64.1604.

⁵ See *Call Authentication Trust Anchor, Implementation of TRACED Act Section 6(a)—Knowledge of Customers by Entities with Access to Numbering Resources*, WC Docket Nos. 17-97 and 20-67, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd 3241, 3252, para. 24 (Mar. 31, 2020) (*First Caller ID Authentication Report and Order and Further Notice*).

⁶ See *Second Caller ID Authentication Report and Order* at 9, para. 16.

⁷ Cf. *Carter v. Carter Coal Co.*, 298 U.S. 238, 311 (1936); *A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495, 541-42 (1935).

⁸ *Second Caller ID Authentication Report and Order* at 4, para 6.

⁹ *Id.* More specifically, a working group of the Internet Engineering Task Force (IETF) called the Secure Telephony Identity Revisited (STIR) developed several protocols for authenticating caller ID information. *Id.* at 4, para 7. And the Alliance for Telecommunications Industry Solutions (ATIS), in conjunction with the SIP Forum, produced the Signature-based Handling of Asserted information using toKENs (SHAKEN) specification, which standardizes how the protocols produced by STIR are implemented across the industry. *Id.* at 4, para 7.

¹⁰ *Second Caller ID Authentication Report and Order* at 4, para 6.

ID information can be trusted.¹¹ To maintain trust and accountability in the voice service providers that vouch for the caller ID information, a neutral governance system issues the certificates.

5. The STIR/SHAKEN governance system is comprised of several different entities fulfilling specialized roles. The Governance Authority, managed by a board consisting of representatives from across the voice service industry, defines the policies and procedures for which entities can issue or acquire certificates.¹² The Policy Administrator applies the rules set by the Governance Authority, confirms that certification authorities are authorized to issue certificates, and confirms that voice service providers are authorized to request and receive certificates.¹³ Certification Authorities, of which there are several, issue the certificates used to authenticate and verify calls.¹⁴ And finally, the voice service providers themselves, which, when acting as call initiators, select an approved certification authority from which to request a certificate, and when acting as call recipients, check with certification authorities to ensure that the certificates they receive were issued by the correct certification authority.¹⁵

6. To receive a digital certificate, a voice service provider must first apply to the Policy Administrator for a Service Provider Code (SPC) token.¹⁶ To obtain an SPC token, the Governance Authority policy requires that a voice service provider must (1) have a current FCC Form 499A on file with the Commission, (2) have been assigned an Operating Company Number (OCN), and (3) have direct access to telephone numbers from the North American Numbering Plan Administrator (NANPA) and the

¹¹ See *First Caller ID Authentication Report and Order and Further Notice*, 35 FCC Rcd at 3246, para. 9.

¹² *Id.* at 3246, para. 10; see STI-Governance Authority, Operating Procedures, Version 1.2 at 1 (2019), <https://www.atis.org/wp-content/uploads/sites/14/2020/04/STI-GA-Operating-Procedures-Version-1.2.pdf> (STI-GA Operating Procedures); see also TRACED Act § 4(a)(1), (b)(1)(A) (defining “STIR/SHAKEN authentication framework” as “the secure telephone identity revisited and signature-based handling of asserted information using tokens standards proposed by the information and communications technology industry” and requiring voice service providers to “to implement the STIR/SHAKEN authentication framework in the internet protocol networks of the provider of voice service”).

¹³ *First Caller ID Authentication Report and Order and Further Notice*, 35 FCC Rcd at 3246, para. 10. The Governance Authority issued a request for proposals and subsequently selected iconectiv to fill this role. Press Release, ATIS, Mitigating Illegal Robocalling Advances with Secure Telephone Identity Governance Authority Board’s Selection of iconectiv as Policy Administrator (May 30, 2019), <https://sites.atis.org/insights/mitigating-illegal-robocalling-advances-with-secure-telephone-identity-governance-authority-boards-selection-of-iconectiv-as-policy-administrator/>.

¹⁴ The Policy Administrator, iconectiv, vets and approves the organizations that serve as Certification Authorities. See Press Release, STI Governance Authority, Certification Authority registration now open for U.S. Calling Number Verification Service (Dec. 6, 2019), <https://www.atis.org/sti-ga/news/docs/certification-authority-registration-now-open-for-us-calling-number-verification-service.pdf>. The Policy Administrator website reflects that there are currently five approved Certification Authorities. See iconectiv, *Approved Certification Authorities*, <https://authenticate.iconectiv.com/approved-certification-authorities> (last visited Nov. 2, 2020).

¹⁵ *First Caller ID Authentication Report and Order and Further Notice*, 35 FCC Rcd at 3246, para. 10. As reported by the Governance Authority, 44 voice service providers have been approved to participate in the STIR/SHAKEN framework through the governance system and 15 providers have completed the testing process and are finalizing their approval paperwork. ATIS, STI-GA NANC Update at 11:15:00 (Sept. 24, 2020), <https://www.fcc.gov/news-events/events/2020/09/north-american-numbering-council-meeting>; see also iconectiv, *Authorized Service Providers*, <https://authenticate.iconectiv.com/authorized-service-providers-authenticate> (last visited Oct. 1, 2020) (providing a partial list of approved voice service providers).

¹⁶ See STI-Governance Authority, STI-GA Policy Decisions Document at 1 (Nov. 18, 2020), <https://sti-ga.atis.org/wp-content/uploads/sites/14/2020/11/201118-STIGA-Board-Policy.pdf> (STI-GA Policy Decisions Document); STI-Governance Authority, Revocation of STI Service Provider Code Tokens at 1, <https://sti-ga.atis.org/wp-content/uploads/sites/14/2020/09/STI-GA-SPC-token-Revocation-Policy-091520.pdf> (Service Provider Token Revocation Policy).

National Pooling Administrator.¹⁷ The SPC token then permits the voice service provider to obtain the digital certificates it will use to authenticate calls from one of the approved Certification Authorities.¹⁸ The SPC token therefore is a prerequisite for a voice service provider to participate in the STIR/SHAKEN ecosystem, and management of token access is the mechanism by which the Policy Administrator and Governance Authority protect the system from abuse and misuse.¹⁹

7. The Policy Administrator grants SPC tokens to eligible voice service providers conditioned on the execution of a signed agreement with each voice service provider, stating that the voice service provider will follow the appropriate standards.²⁰ This agreement establishes that if the Policy Administrator deems the voice service provider to be in breach, it has the authority to suspend or revoke a voice service provider's SPC token.²¹ The Governance Authority possesses sole authority to direct the Policy Administrator to revoke an SPC token, except in limited circumstances where the Policy Administrator may perform such actions on its own initiative, reviewable by the Governance Authority.²² In the Service Provider Token Revocation Policy, the Governance Authority lists the reasons for which an SPC token may be revoked: (1) in the situation of compromised credentials, i.e., a voice service provider's private key has been lost, stolen, or compromised, or a certification authority has been compromised; (2) the voice service provider exits the ecosystem; (3) the voice service provider failed to adhere to the policy and technical requirements of the system, including the SPC Token Access Policy, funding requirements, or technical specifications regarding the use of STIR/SHAKEN; or (4) when directed by a court, the Commission, or another body with relevant legal authority due to a violation of Federal law related to caller ID authentication.²³ When a service provider's credentials are compromised or it exits the ecosystem (the former two scenarios), the Policy Administrator may revoke a service provider's SPC token without prior direction from the Governance Authority because in either circumstance there will be no question as to its appropriateness.²⁴ However, when a service provider fails to adhere to a policy or technical requirement, or at the direction of a court, the Commission, or another relevant legal authority (the latter two scenarios), the Governance Authority conducts the revocation process according to the process outlined in the Service Provider Token Revocation Policy.

¹⁷ See STI-GA Policy Decisions Document at 1. On November 18, 2020, the Governance Authority announced an update to its Service Provider Code (SPC) Token Access Policy. See Press Release, ATIS, New Secure Telephone Identity Governance Authority Policies Advance Industry Illegal Robocall Mitigation Goals (Nov. 18, 2020), <https://www.atis.org/press-releases/new-secure-telephone-identity-governance-authority-policies-advance-industry-illegal-robocall-mitigation-goals/>; *STIR/SHAKEN Caller ID Authentication Governance Framework Revised to Expand Participation*, WC Docket No. 17-97, Public Notice, DA 20-1374 (Nov. 18, 2020). Under the revised policy, an entity will no longer need direct access to telephone numbers; in place of that requirement, an entity will need to have certified with the Commission that they have implemented STIR/SHAKEN or comply with the Robocall Mitigation Program requirements and are listed in the Commission database. See STI-GA Policy Decisions Document at 1. The Governance Authority provided that the revised policy will be effective upon the Commission's Robocall Mitigation Certification filing deadline and that, until then, the current SPC Token Access Policy remains in effect. *Id.* at 1.

¹⁸ See STI-GA Policy Decisions Document at 1.

¹⁹ See Service Provider Token Revocation Policy at 1.

²⁰ See Service Provider Token Revocation Policy at 1; STI-Governance Authority, STI-Participant Agreement, Service Provider § 6, <https://sti-ga.atis.org/wp-content/uploads/sites/14/2020/09/STI-Participant-Agreement-082520.pdf> (last visited Oct. 1, 2020) (STI-Participant Agreement).

²¹ STI-Participant Agreement § 8.

²² See Service Provider Token Revocation Policy at 2.

²³ See *id.* at 1-2.

²⁴ *Id.* at 2.

8. Before the Governance Authority revokes an SPC token due to a voice service provider's violation of a policy, technical, or legal requirement, the Governance Authority follows a multi-step process described by the Service Provider Token Revocation Policy, which allows the voice service provider to respond to the alleged infraction and appeal any adverse decision according to the Governance Authority's operating procedures.²⁵ According to the Service Provider Token Revocation Policy, a voice service provider, the Policy Administrator, a Certification Authority, or a regulatory agency may report a potential issue to the Governance Authority via a complaint.²⁶ Next, the Governance Authority will conduct a formal review of the complaint and gather additional information.²⁷ The Governance Authority Board then votes on whether to revoke the token, requiring a two thirds vote of the Governance Authority Board to approve the revocation.²⁸ The affected service provider may appeal an adverse decision by the Governance Authority through a formal appeal process outlined in the Governance Authority's Operating Procedures.²⁹ In addition to the Governance Authority reviewing the complaint and issuing a written response, the formal appeal process includes the potential for a hearing before an independent panel of three individuals.³⁰ Following a hearing, the appeals panel issues a written decision stating its findings of fact, conclusions, and the reasoning for its conclusions.³¹ If a voice service provider loses the appeal, or chooses not to appeal, it may seek reinstatement to the STIR/SHAKEN ecosystem if the Governance Authority approves of its plan of action to remedy the issue or issues underlying the token revocation.³²

9. In the *First Caller ID Authentication Report and Order and Further Notice*, the Commission declined to impose new regulations on the STIR/SHAKEN governance structure.³³ The Commission reasoned, in part, that the Commission did yet not know the nature and scope of the type of problems that may arise that would require Commission intervention.³⁴

²⁵ See *id.* at 2-4.

²⁶ See *id.* at 2-3.

²⁷ See *id.* at 2-4.

²⁸ See *id.* at 3-4. As part of the NANC's 2018 report on the establishment of a Governance Authority and the deployment of STIR/SHAKEN, the NANC recommended the creation of a policy and decision-making body comprised of representatives from across the communications industry. Call Authentication Trust Anchor Working Grp., N. Am. Numbering Council, Report on Selection of Governance Authority and Timely Deployment of SHAKEN/STIR at 7 (2018), http://nanc-chair.org/docs/mtg_docs/May_18_Call_Authentication_Trust_Anchor_NANC_Final_Report.pdf. After Chairman Pai accepted the NANC's recommendations, the various industry representatives outlined in the NANC's report selected a twelve-member board to be operated under the auspices of ATIS. Press Release, ATIS, Secure Telephone Identity Governance Authority Launched in Major Industry Effort to Combat Unwanted Robocalling (Sept. 9, 2018), <https://sites.atis.org/insights/secure-telephone-identity-governance-authority-launched-in-major-industry-effort-to-combat-unwanted-robocalling>.

²⁹ See Service Provider Token Revocation Policy at 4.

³⁰ See STI-GA Operating Procedures at 8-9. For hearings conducted as a part of the formal complaint process, the three panelists must not have been directly involved in the matter and "will not be materially or directly affected by any decision made or to be made in the dispute." *Id.* And out of the three panelists, at least two must be acceptable to the appealing party and at least two must be acceptable to the responding party. *Id.*

³¹ See *id.* at 9.

³² STI-Governance Authority, Reinstatement Procedures for STI Service Provider Code Tokens at 1, <https://sti-ga.atis.org/wp-content/uploads/sites/14/2020/09/STI-GA-SPC-token-Reinstatement-Policy-091520.pdf> (last visited Oct. 1, 2020). The Commission is aware of the timing discrepancy between the appeal process as described in the Reinstatement Policy and the STI-GA Operating Procedures, and we encourage the STI-GA to further clarify the timing for each.

³³ See *First Caller ID Authentication Report and Order and Further Notice*, 35 FCC Rcd at 3268, para. 56.

³⁴ See *id.*

III. DISCUSSION

10. Although we continue to refrain from unduly intruding upon the private STIR/SHAKEN governance structure, in this Further Notice we preliminarily conclude that it is important for the Commission to have a role in reviewing the Governance Authority's decisions to revoke a voice service provider's SPC token because such decisions will have the effect of placing the voice service provider out of compliance with our rules. Specifically, we propose to establish an oversight role for the Commission over the Governance Authority's token revocation decisions similar to the one we hold in the context of decisions by the Universal Service Administrative Company (USAC).³⁵ Under our universal service appeals rules, after first seeking internal review by USAC, an aggrieved party may seek review of USAC's decision by the Commission.³⁶ Our proposed rules would follow this same format and allow review by the Wireline Competition Bureau, except for requests for review that raise "novel questions of fact, law or policy," which would be considered by the full Commission.³⁷ We seek comment on this proposal.

11. In more detail, we propose to adopt similar procedural and timing requirements as in our universal service rules. We propose that any voice service provider that has its SPC token revoked by the Governance Authority, must first, before appealing that decision to the Commission, exhaust all review of this decision by the Governance Authority, including completing the formal appeal process outlined in the Governance Authority's Operating Procedures and described above. We believe that the Governance Authority's robust review procedures will enable the dispute to fully develop before potentially reaching the Commission, thereby making it easier for the Commission to identify the relevant facts and issues. Do commenters agree? Are there any reasons we should allow for appeals of interim or other relief to the Commission before the full Governance Authority process has been completed? If so, how should such a procedure work? Are there any entities other than the affected voice service providers that we should allow to take advantage of such appeal or other procedures?

12. We propose to give a voice service provider 60 days after the Governance Authority upholds its adverse decision to request review by the Commission and to apply the time periods for filing oppositions and replies set forth in section 1.45 of our rules.³⁸ Do commenters agree that we should adopt these filing deadlines? Are there reasons relevant to the SPC token revocation context to allow service providers more or less time than parties are provided under those rules? Should we require or allow the Governance Authority to file a statement in opposition to the request for review?

13. We further propose to require requests for review to be filed within the Commission's Electronic Comment Filing System, in a dedicated inbox available to the public and be captioned with the name of the party.³⁹ Accordingly, we propose to direct the Wireline Competition Bureau to establish a new docket for these appeals. Next, we propose that the request for review, at a minimum, contain: (1) a statement setting forth the voice service provider's asserted basis for appealing the Governance Authority's decision to revoke the SPC token; (2) a full statement of relevant, material facts with supporting affidavits and documentation, including any background information the voice service provider deems useful to the Commission's review; and (3) the question presented for review, with reference, where appropriate, to any underlying Commission rule or Governance Authority policy. These

³⁵ The Universal Service Administrative Company (USAC) is a non-profit entity designated by the Commission to administer universal service programs.

³⁶ See 47 CFR § 54.719.

³⁷ See *id.* § 54.722.

³⁸ See *id.* § 54.720; *id.* § 1.45.

³⁹ See, e.g., FCC, Electronic Comment Filing System, *Non-Docketed Filing*, <https://www.fcc.gov/ecfs/filings/nodocket> (last viewed Nov. 30, 2020).

three criteria closely track our universal service rules.⁴⁰ In contrast to our universal service rules, however, we propose not to require that requests for review include a statement of the relief sought because we assume that the relief sought will always be the reversal of the Governance Authority's revocation decision. We seek comment on these proposed filing requirements and on what other information we should require a voice service provider include in a request for review. And we propose to require that a copy of the request for review be sent to the Governance Authority via sti-ga@atis.org or another method specified in the Governance Authority's Operating Procedures.⁴¹ We further propose to require the Governance Authority, upon receipt of a copy of a voice service provider's request for review, to send to the Bureau the full record of the SPC token revocation appeal, including the written decision. We seek comment on these proposed processes. What specific information should the Commission require the Governance Authority to provide? How should we address requests for confidentiality, and should we treat any filings as presumptively confidential by default?⁴² Are there any other ways in which we should depart from our established process for universal service appeals? We believe that the reporting costs imposed upon the Governance Authority by the process we propose would be minimal, and we seek comment on this view.

14. We further propose that throughout the period of review, until the Commission or Bureau issue an initial decision, a voice service provider will not be judged to be in violation of our section 64.6301 rules or the TRACED Act. We seek comment on these proposals. Is this the appropriate status for a voice service provider to maintain throughout the review process? Should we allow the voice service provider to maintain possession and use of its SPC token until the Bureau or Commission has reached a decision? Are there are other relevant procedural requirements that we should adopt? We also propose that should the Bureau or the Commission uphold or otherwise decide not to overturn the Governance Authority's decision, a voice service provider will not maintain the right to use its SPC token by filing a petition for reconsideration or application for review, in the absence of a stay of the action of the Bureau or the Commission.⁴³ We seek comment on this proposal. Given the novelty and potential complexity of revocation appeals, at this time we do not propose to impose a time limit on Bureau or Commission review, and we seek comment on this preliminary view.

15. We propose that the standard of review by either the Bureau or the Commission be *de novo*. Do commenters agree? We also seek comment on the rules or other sources of law the Bureau or the Commission should apply when reviewing a revocation. Should we incorporate by reference the policies established by the Governance Authority regarding token revocation and determine whether the Governance Authority applied those policies correctly to the facts of a given appeal? Alternatively, do commenters believe we should limit our review merely to specific types of procedural or obvious error in the Governance Authority's process?

16. To establish this process, we propose relying on the authority Congress provided to the Commission under section 4(b)(1) of the TRACED Act to require the implementation of the STIR/SHAKEN framework.⁴⁴ We believe that the proposed appeal process would be consistent with this authority with minimal cost to the industry. We seek comment on this proposal, and whether we have independent authority under section 251(e) of the Communications Act or under the Truth in Caller ID Act⁴⁵ or other statutory provisions.⁴⁶

⁴⁰ See *id.* § 54.721(b).

⁴¹ Cf. *id.* § 54.721(c).

⁴² See generally 47 CFR § 0.459.

⁴³ See 47 U.S.C. § 405(a); 47 CFR §§ 1.102(b), 1.106(n).

⁴⁴ See TRACED Act § 4(b)(1).

⁴⁵ See 47 U.S.C. §§ 251(e), 227(e)(1).

⁴⁶ See, e.g., 47 U.S.C. §§ 154(i), 201.

IV. PROCEDURAL MATTERS

17. *Ex Parte Rules.* This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.⁴⁷ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with Rule 1.1206(b). In proceedings governed by Rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

18. *Filing of Comments and Reply Comments.* Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- **Electronic Filers.** Comments may be filed electronically using the Internet by accessing the ECFS: www.fcc.gov/ecfs.
- **Paper Filers.** Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.
 - Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.
 - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
 - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street NE, Washington, DC 20554.
 - Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19. See FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy, Public Notice, DA 20-304 (March 19, 2020), <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>.

⁴⁷ 47 CFR §§ 1.1200 *et seq.*

- Comments Containing Proprietary Information. Commenters that file what they consider to be proprietary information may request confidential treatment pursuant to section 0.459 of the Commission's rules. Commenters should file both their original comments for which they request confidentiality and redacted comments, along with their request for confidential treatment. Commenters should not file proprietary information electronically. *See Examination of Current Policy Concerning the Treatment of Confidential Information Submitted to the Commission*, Report and Order, 13 FCC Rcd 24816 (1998), Order on Reconsideration, 14 FCC Rcd 20128 (1999). Even if the Commission grants confidential treatment, information that does not fall within a specific exemption pursuant to the Freedom of Information Act (FOIA) must be publicly disclosed pursuant to an appropriate request. *See* 5 U.S.C. § 552; 47 CFR § 0.461. We note that the Commission may grant requests for confidential treatment either conditionally or unconditionally. As such, we note that the Commission has the discretion to release information on public interest grounds that falls within the scope of a FOIA exemption.
- People with Disabilities. To request materials in accessible formats for people with disabilities (braille, large print, electronic files, or audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (tty).
- Availability of Documents. If the FCC Headquarters is open to the public, comments, reply comments, and *ex parte* submissions will be available for public inspection during regular business hours in the FCC Reference Center, Federal Communications Commission, 45 L Street NE, Washington, DC 20554. These documents will also be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, or Portable Document formats.

19. *Initial Regulatory Flexibility Analysis.* As required by the RFA,⁴⁸ the Commission has prepared an IRFA of the possible significant economic impact on small entities of the policies and rules proposed in this *Second Further Notice of Proposed Rulemaking*. The IRFA is set forth in Appendix B. We request written public comment on this IRFA. Comments must be filed by the deadlines for comments on the *Second Further Notice of Proposed Rulemaking* indicated on the first page of this document and must have a separate and distinct heading designating them as responses to the IRFA. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this *Second Further Notice of Proposed Rulemaking*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).⁴⁹

20. *Paperwork Reduction Act.* This document contains proposed new information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.⁵⁰

21. *Contact person.* For further information about this proceeding, please contact CJ Ferraro, FCC Wireline Competition Bureau, Competition Policy Division at (202) 418-1322 or connor.ferraro@fcc.gov.

⁴⁸ *See* 5 U.S.C. § 603.

⁴⁹ *See* 5 U.S.C. § 603(a).

⁵⁰ *See* 44 U.S.C. § 3506(c)(4).

V. ORDERING CLAUSES

22. IT IS ORDERED, pursuant to sections 4(i), 4(j), 201, 227(e), 227b, 251(e), and 303(r), of the Act, 47 U.S.C. §§ 154(i), 154(j), 201, 227(e), 227b, 251(e), and 303(r), that that this *Second Further Notice of Proposed Rulemaking* IS ADOPTED.

23. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Second Further Notice of Proposed Rulemaking*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Draft Proposed Rules

The Federal Communications Commission amends part 64 of Title 47 of the Code of Federal Regulations as follows:

PART 64 – MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

* * * * *

1. Amend Subpart HH by adding new section 64.6308 as follows:

§ 64.6308 Review of Governance Authority Decision to Revoke an SPC Token

(a) *Parties permitted to seek review of Governance Authority decision.*

- (1) Any intermediate provider or voice service provider aggrieved by a Governance Authority decision to revoke that intermediate provider or voice service provider's Service Provider Code (SPC) token, must seek review from the Governance Authority and complete the appeals process established by the Governance Authority prior to seeking Commission review.
- (2) Any intermediate provider or voice service provider aggrieved by an action to revoke its SPC token taken by the Governance Authority, after exhausting the appeals process provided by the Governance Authority, may then seek review from the Commission, as set forth in this section.

(b) *Filing deadlines.*

- (1) An intermediate provider or voice service provider requesting Commission review of a Governance Authority decision to revoke that intermediate provider or voice service provider's SPC token by the Commission, shall file such a request electronically in the designated Electronic Comment Filing System (ECFS) inbox within sixty days from the date the Governance Authority issues its final decision.
- (2) Parties shall adhere to the time periods for filing oppositions and replies set forth in § 1.45.

(c) *Filing requirements.*

- (1) A request for review of a Governance Authority decision to revoke an intermediate provider or voice service provider's SPC token by the Commission shall be filed electronically in the designated ECFS inbox. The request for review shall be captioned "In the matter of Request for Review by (name of party seeking review) of Decision of the Governance Authority to Revoke an SPC Token."
- (2) A request for review shall contain:
 - (i) A statement setting forth the intermediate provider or voice service provider's asserted basis for appealing the Governance Authority's decision to revoke the SPC token;
 - (ii) A full statement of relevant, material facts with supporting affidavits and documentation, including any background information the intermediate provider or voice service provider deems useful to the Commission's review; and
 - (iii) The question presented for review, with reference, where appropriate, to any underlying Commission rule or Governance Authority policy.

(3) A copy of a request for review that is submitted to the Commission shall be served on the Governance Authority via sti-ga@atis.org or in accordance with any alternative delivery mechanism the Governance Authority may establish in its operating procedures.

(d) Review by the Wireline Competition Bureau or the Commission.

(1) Requests for review of a Governance Authority decision to revoke an intermediate provider or voice service provider's SPC token that are submitted to the Commission shall be considered and acted upon by the Wireline Competition Bureau, which shall issue a written decision; provided, however, that requests for review that raise novel questions of fact, law, or policy shall be considered by the full Commission.

(2) An affected party may seek review of a decision issued under delegated authority by the Wireline Competition Bureau pursuant to the rules set forth in § 1.115.

(e) Standard of review.

(1) The Wireline Competition Bureau shall conduct *de novo* review of Governance Authority decisions to revoke an intermediate provider or voice service provider's SPC token.

(2) The Commission shall conduct *de novo* review of Governance Authority decisions to revoke an intermediate provider or voice service provider's SPC token that involve novel questions of fact, law, or policy; provided, however, that the Commission shall not conduct *de novo* review of decisions issued by the Wireline Competition Bureau under delegated authority.

(f) Status during pendency of a request for review and a Governance Authority decision.

(1) When an intermediate provider or voice service provider has sought timely Commission review of a Governance Authority decision to revoke an intermediate provider or voice service provider's SPC token under this section, the intermediate provider or voice service provider shall not be considered to be in violation of the Commission's call authentication rules under § 64.6301 until and unless the Wireline Competition Bureau or the Commission, pursuant to paragraph (d)(1) of this section, has upheld or otherwise decided not to overturn the Governance Authority's decision.

(2) In accordance with §§ 1.102(b) and 1.106(n), the effective date of any action pursuant to paragraph (d) shall not be stayed absent order by the Wireline Competition Bureau or the Commission.

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended,¹ the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this *Second Further Notice of Proposed Rulemaking (Second Further Notice)*. The Commission requests written public comments on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments provided on the first page of the *Second Further Notice*. The Commission will send a copy of the *Second Further Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the *Second Further Notice* and IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need for, and Objectives of, the Proposed Rules

2. The *Second Further Notice* proposes measures as part of the Commission's efforts to combat illegal spoofed robocalls. Specifically, the *Second Further Notice* proposes to establish an oversight role for the Commission of the STIR/SHAKEN governance system's token revocation process. Under the proposal, any voice service provider that has its Service Provider Code token revoked may seek review of this decision by the Commission through set procedures. The proposal in the *Second Further Notice* will help promote effective caller ID authentication through STIR/SHAKEN.

B. Legal Basis

3. The *Second Further Notice* proposes to find authority for these proposed rules under TRACED Act. Section 4(b)(1) of the TRACED Act provided authority to require the implementation of the STIR/SHAKEN framework. We preliminarily believe that to effectively direct the implementation of STIR/SHAKEN consistent with the TRACED Act, the Commission must have a role in decisions to revoke Service Provider Code tokens because the result of such a decision could place the service provider in noncompliance with our rules. The *Second Further Notice* seeks comment on whether we have independent authority under section 251(e) of the Communications Act of 1934, as amended (the Act),⁴ under the Truth in Caller ID Act,⁵ or any other sources of authority.⁶

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

4. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules and by the rule revisions on which the Notice seeks comment, if adopted.⁷ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁸ In addition, the term "small business" has the same meaning as the term "small-business

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ See 5 U.S.C. § 603(a).

⁴ 47 U.S.C. § 251(e).

⁵ 47 U.S.C. § 227(e).

⁶ See, e.g., 47 U.S.C. §§ 154(i), 201.

⁷ See 5 U.S.C. § 603(b)(3).

⁸ See 5 U.S.C. § 601(6).

concern” under the Small Business Act.⁹ A “small-business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁰

1. Wireline Carriers

5. *Wired Telecommunications Carriers.* The U.S. Census Bureau defines this industry as “establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.”¹¹ The SBA has developed a small business size standard for Wired Telecommunications Carriers, which consists of all such companies having 1,500 or fewer employees.¹² U.S. Census Bureau data for 2012 show that there were 3,117 firms that operated that year.¹³ Of this total, 3,083 operated with fewer than 1,000 employees.¹⁴ Thus, under this size standard, the majority of firms in this industry can be considered small.

6. *Local Exchange Carriers (LECs).* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. The closest applicable NAICS Code category is Wired Telecommunications Carriers.¹⁵ Under the applicable SBA size standard, such a business is small if it has 1,500 or fewer employees.¹⁶ U.S. Census Bureau data for 2012 show that there were 3,117 firms that operated for the entire year.¹⁷ Of that total, 3,083 operated with fewer than 1,000 employees.¹⁸ Thus under this category and the associated size standard, the Commission estimates that the majority of local exchange carriers are small entities.

⁹ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

¹⁰ See 15 U.S.C. § 632.

¹¹ See U.S. Census Bureau, *2017 NAICS Definition, “517311 Wired Telecommunications Carriers”*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹² See 13 CFR § 120.201, NAICS Code 517311 (previously 517110).

¹³ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table No. EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012*. NAICS Code 517110. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517110.

¹⁴ *Id.* The largest category provided by the census data is “1000 employees or more” and a more precise estimate for firms with fewer than 1,500 employees is not provided.

¹⁵ See U.S. Census Bureau, *2017 NAICS Definition, NAICS Code 517311 “Wired Telecommunications Carriers,”*, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

¹⁶ See 13 CFR § 120.201, NAICS Code 517311 (previously 517110).

¹⁷ See U.S. Census Bureau, *2012 Economic Census of the United States*, Table No. EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012*. NAICS Code 517110. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517110.

¹⁸ *Id.* The largest category provided by the census data is “1000 employees or more” and a more precise estimate for firms with fewer than 1,500 employees is not provided.

7. *Incumbent LECs.* Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The closest applicable NAICS Code category is Wired Telecommunications Carriers.¹⁹ Under the applicable SBA size standard, such a business is small if it has 1,500 or fewer employees.²⁰ U.S. Census Bureau data for 2012 indicate that 3,117 firms operated the entire year.²¹ Of this total, 3,083 operated with fewer than 1,000 employees.²² Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by our actions. According to Commission data, one thousand three hundred and seven (1,307) Incumbent Local Exchange Carriers reported that they were incumbent local exchange service providers.²³ Of this total, an estimated 1,006 have 1,500 or fewer employees.²⁴ Thus, using the SBA's size standard the majority of incumbent LECs can be considered small entities.

8. *Competitive Local Exchange Carriers (Competitive LECs), Competitive Access Providers (CAPs), Shared-Tenant Service Providers, and Other Local Service Providers.* Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate NAICS Code category is Wired Telecommunications Carriers²⁵ and under that size standard, such a business is small if it has 1,500 or fewer employees.²⁶ U.S. Census Bureau data for 2012 indicate that 3,117 firms operated during that year.²⁷ Of that number, 3,083 operated with fewer than 1,000 employees.²⁸ Based on these data, the Commission concludes that the majority of Competitive LECs, CAPs, Shared-Tenant Service Providers, and Other Local Service Providers, are small entities. According to Commission data, 1,442 carriers reported that they were engaged in the provision of either competitive local exchange services or competitive access provider services.²⁹ Of these 1,442 carriers, an estimated 1,256 have 1,500 or fewer employees.³⁰ In addition, 17 carriers have reported that they are Shared-Tenant Service Providers, and all 17 are estimated to have 1,500 or fewer employees.³¹ Also, 72

¹⁹ See, U.S. Census Bureau, 2017 NAICS Definition, NAICS Code 517311 "Wired Telecommunications Carriers," <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

²⁰ See 13 CFR § 121.201, NAICS Code 517311 (previously 517110).

²¹ See U.S. Census Bureau, 2012 Economic Census of the United States, Table No. EC1251SSSZ5, Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012 (517110 Wired Telecommunications Carriers). https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517110.

²² *Id.*

²³ See *Trends in Telephone Service*, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*).

²⁴ *Id.*

²⁵ See U.S. Census Bureau, 2017 NAICS Definition, NAICS Code 517311 "Wired Telecommunications Carriers," <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

²⁶ See 13 CFR § 120.201, NAICS Code 517311 (previously 517110).

²⁷ See U.S. Census Bureau, 2012 Economic Census of the United States, Table No. EC1251SSSZ5, Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012, NAICS Code 517110. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517110.

²⁸ *Id.* The largest category provided by the census data is "1000 employees or more" and a more precise estimate for firms with fewer than 1,500 employees is not provided.

²⁹ See Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, Trends in Telephone Service at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*), https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf.

³⁰ *Id.*

³¹ *Id.*

carriers have reported that they are Other Local Service Providers.³² Of this total, 70 have 1,500 or fewer employees.³³ Consequently, based on internally researched FCC data, the Commission estimates that most providers of competitive local exchange service, competitive access providers, Shared-Tenant Service Providers, and Other Local Service Providers are small entities.

9. We have included small incumbent LECs in this present RFA analysis. As noted above, a “small business” under the RFA is one that, *inter alia*, meets the pertinent small-business size standard (e.g., a telephone communications business having 1,500 or fewer employees) and “is not dominant in its field of operation.”³⁴ The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not “national” in scope.³⁵ We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

10. *Interexchange Carriers (IXCs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for Interexchange Carriers. The closest applicable NAICS Code category is Wired Telecommunications Carriers.³⁶ The applicable size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.³⁷ U.S. Census Bureau data for 2012 indicate that 3,117 firms operated for the entire year.³⁸ Of that number, 3,083 operated with fewer than 1,000 employees.³⁹ According to internally developed Commission data, 359 companies reported that their primary telecommunications service activity was the provision of interexchange services.⁴⁰ Of this total, an estimated 317 have 1,500 or fewer employees.⁴¹ Consequently, the Commission estimates that the majority of interexchange service providers are small entities.

11. *Cable System Operators (Telecom Act Standard)*. The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than one percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.”⁴² As of 2018, there were approximately 50,504,624 cable video subscribers in the

³² *Id.*

³³ *Id.*

³⁴ 5 U.S.C. § 601(3).

³⁵ Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (filed May 27, 1999). The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” 15 U.S.C. § 632(a); 5 U.S.C. § 601(3). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. 13 CFR § 121.102(b).

³⁶ See U.S. Census Bureau, 2017 NAICS Definition, NAICS Code 517311 “Wired Telecommunications Carriers,” <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517311&search=2017>.

³⁷ See 13 CFR § 120.201, NAICS Code 517311 (previously 517110).

³⁸ See U.S. Census Bureau, 2012 Economic Census of the United States, Table No. EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012 NAICS Code 517110*. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517110.

³⁹ *Id.* The largest category provided by the census data is “1000 employees or more” and a more precise estimate for firms with fewer than 1,500 employees is not provided.

⁴⁰ See *Trends in Telephone Service*, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*). https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf.

⁴¹ *Id.*

⁴² 47 U.S.C. § 543(m)(2); see 47 CFR § 76.901(f) & n.1–3.

United States.⁴³ Accordingly, an operator serving fewer than 505,046 subscribers shall be deemed a small operator if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.⁴⁴ We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million.⁴⁵ Therefore we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under *the* definition in the Communications Act.

2. Wireless Carriers

12. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and wireless video services.⁴⁶ The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.⁴⁷ For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.⁴⁸ Of this total, 955 firms employed fewer than 1,000 employees and 12 firms employed 1000 employees or more.⁴⁹ Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities.

13. The Commission's own data—available in its Universal Licensing System—indicate that, as of August 31, 2018 there are 265 Cellular licensees that will be affected by our actions.⁵⁰ The Commission does not know how many of these licensees are small, as the Commission does not collect that information for these types of entities. Similarly, according to internally developed Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.⁵¹ Of this total, an estimated 261 have 1,500 or fewer employees, and 152 have more than 1,500

⁴³ S&P Global Market Intelligence, *U.S. Cable Subscriber Highlights, Basic Subscribers(actual) 2018, U.S. Cable MSO Industry Total*, <https://platform.marketintelligence.spglobal.com/>.

⁴⁴ 47 CFR § 76.901(f) and n. ff. 1, 2, and 3.

⁴⁵ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. See 47 CFR § 76.909(b).

⁴⁶ U.S. Census Bureau, *2017 NAICS Definitions*, "517312 Wireless Telecommunications Carriers (Except Satellite)" <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517312&search=2017%20NAICS%20Search>.

⁴⁷ 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

⁴⁸ U.S. Census Bureau, *2012 Economic Census of the United States*, Table EC1251SSSZ5, *Information: Subject Series: Etab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517210.

⁴⁹ *Id.* Available census data does not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees. The largest category provided is for firms with "1000 employees or more."

⁵⁰ See <http://wireless.fcc.gov/uls>. For the purposes of this IRFA, consistent with Commission practice for wireless services, the Commission estimates the number of licensees based on the number of unique FCC Registration Numbers.

⁵¹ See Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, *Trends in Telephone Service* at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*), https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf.

employees.⁵² Thus, using available data, we estimate that the majority of wireless firms can be considered small.

14. *Satellite Telecommunications.* This category comprises firms “primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”⁵³ Satellite telecommunications service providers include satellite and earth station operators. The category has a small business size standard of \$35 million or less in average annual receipts, under SBA rules.⁵⁴ For this category, U.S. Census Bureau data for 2012 show that there were a total of 333 firms that operated for the entire year.⁵⁵ Of this total, 299 firms had annual receipts of less than \$25 million.⁵⁶ Consequently, we estimate that the majority of satellite telecommunications providers are small entities.

3. Resellers

15. *Local Resellers.* The SBA has not developed a small business size standard specifically for Local Resellers. The SBA category of Telecommunications Resellers is the closest NAICS code category for local resellers. The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. Mobile virtual network operators (MVNOs) are included in this industry.⁵⁷ Under the SBA’s size standard, such a business is small if it has 1,500 or fewer employees.⁵⁸ U.S. Census Bureau data from 2012 show that 1,341 firms provided resale services during that year.⁵⁹ Of that number, all operated with fewer than 1,000 employees.⁶⁰ Thus, under this category and the associated small business size standard, the majority of these resellers can be considered small entities. According to Commission data, 213 carriers have reported that they are engaged in the provision of local resale services.⁶¹ Of these, an estimated 211 have 1,500 or fewer employees and two have more than

⁵² See *id.*

⁵³ U.S. Census Bureau, 2017 NAICS Definitions, “517410 Satellite Telecommunications”; <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517410&search=2017+NAICS+Search&search=2017>.

⁵⁴ 13 CFR § 121.201, NAICS code 517410.

⁵⁵ U.S. Census Bureau, 2012 Economic Census of the United States, Table EC1251SSSZ4, Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the United States: 2012, NAICS Code 517410, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ4/naics~517410.

⁵⁶ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard of annual receipts of \$35 million or less.

⁵⁷ U.S. Census Bureau, 2017 NAICS Definition, “517911 Telecommunications Resellers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517911&search=2017%20NAICS%20Search>.

⁵⁸ 13 CFR § 121.201, NAICS code 517911.

⁵⁹ See U.S. Census Bureau, 2012 Economic Census of the United States, Table No. EC1251SSSZ5, Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012 NAICS Code 517911, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517911.

⁶⁰ *Id.* Available census data does not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees. The largest category provided is for firms with “1000 employees or more.”

⁶¹ See *Trends in Telephone Service*, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*).

1,500 employees.⁶² Consequently, the Commission estimates that the majority of local resellers are small entities.

16. *Toll Resellers.* The Commission has not developed a definition for Toll Resellers. The closest NAICS Code Category is Telecommunications Resellers. The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. MVNOs are included in this industry.⁶³ The SBA has developed a small business size standard for the category of Telecommunications Resellers.⁶⁴ Under that size standard, such a business is small if it has 1,500 or fewer employees.⁶⁵ 2012 Census Bureau data show that 1,341 firms provided resale services during that year.⁶⁶ Of that number, 1,341 operated with fewer than 1,000 employees.⁶⁷ Thus, under this category and the associated small business size standard, the majority of these resellers can be considered small entities. According to Commission data, 881 carriers have reported that they are engaged in the provision of toll resale services.⁶⁸ Of this total, an estimated 857 have 1,500 or fewer employees.⁶⁹ Consequently, the Commission estimates that the majority of toll resellers are small entities.

17. *Prepaid Calling Card Providers.* Neither the Commission nor the SBA has developed a small business definition specifically for prepaid calling card providers. The most appropriate NAICS code-based category for defining prepaid calling card providers is Telecommunications Resellers.⁷⁰ This industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. Mobile virtual networks operators (MVNOs) are included in this industry.⁷¹ Under the applicable SBA size standard, such a business is small if it has 1,500 or fewer employees.⁷² U.S. Census Bureau data for 2012 show that 1,341 firms provided resale services during that year.⁷³ Of that number, 1,341 operated with fewer than

⁶² See *id.*

⁶³ U.S. Census Bureau, 2017 NAICS Definition, 517911 Telecommunications Resellers, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517911&search=2017%20NAICS%20Search>.

⁶⁴ 13 CFR § 121.201, NAICS code 517911.

⁶⁵ *Id.*

⁶⁶ See U.S. Census Bureau, 2012 *Economic Census of the United States*, Table No. EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012 NAICS Code 517911*, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517911.

⁶⁷ *Id.* Available census data does not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

⁶⁸ See *Trends in Telephone Service*, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*).

⁶⁹ See *id.*

⁷⁰ U.S. Census Bureau, 2017 NAICS Definition, “517911 Telecommunications Resellers”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517911&search=2017%20NAICS%20Search>.

⁷¹ *Id.*

⁷² 13 CFR § 121.201, NAICS Code 517911.

⁷³ See U.S. Census Bureau, 2012 *Economic Census of the United States*, Table No. EC1251SSSZ5, *Information: Subject Series - Estab & Firm Size: Employment Size of Firms: 2012 NAICS Code 517911*, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ5/naics~517911.

1,000 employees.⁷⁴ Thus, under this category and the associated small business size standard, the majority of these prepaid calling card providers can be considered small entities. According to Commission data, 193 carriers have reported that they are engaged in the provision of prepaid calling cards.⁷⁵ All 193 carriers have 1,500 or fewer employees.⁷⁶ Consequently, the Commission estimates that the majority of prepaid calling card providers are small entities that may be affected by these rules..

4. Other Entities

18. *All Other Telecommunications.* The “All Other Telecommunications” category is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.⁷⁷ This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.⁷⁸ Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.⁷⁹ The SBA has developed a small business size standard for “All Other Telecommunications”, which consists of all such firms with annual receipts of \$35 million or less.⁸⁰ For this category, U.S. Census Bureau data for 2012 show that there were 1,442 firms that operated for the entire year.⁸¹ Of those firms, a total of 1,400 had annual receipts less than \$25 million and 15 firms had annual receipts of \$25 million to \$49, 999,999.⁸² Thus, the Commission estimates that the majority of “All Other Telecommunications” firms potentially affected by our action can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

19. None.

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

20. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rules for such small entities; (3) the use of performance

⁷⁴ *Id.* Available census data does not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees. The largest category provided is for firms with “1000 employees or more.”

⁷⁵ See *Trends in Telephone Service*, at tbl. 5.3.

⁷⁶ *Id.*

⁷⁷ See U.S. Census Bureau, 2017 NAICS Definitions, “517919 All Other Telecommunications”, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517919&search=2017+NAICS+Search&search=2017>.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ See 13 CFR § 121.201, NAICS Code 517919.

⁸¹ U.S. Census Bureau, 2012 Economic Census of the United States, Table EC1251SSSZ4, *Information: Subject Series - Estab and Firm Size: Receipts Size of Firms for the United States: 2012*, NAICS Code 517919, https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/51SSSZ4/naics~517919.

⁸² *Id.*

rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.⁸³

21. The *Second Further Notice* invites comment on the proposal to establish an oversight role for the Commission within the STIR/SHAKEN governance system's token revocation process. The *Second Further Notice* proposes specific processes for the appeals process and seeks comment on alternatives to these proposed processes.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

22. None.

⁸³ 5 U.S.C. § 603(c)(1)-(4).